VINOGRADOV, A.P., akademik, otvetstvennyy redaktor

[Modern methods of analyzing rare elements; papers at the First Interdepartmental Conference on Geology, Mineralogy and the Geochemistry of Rare Elements, April 10-18, 1956] Sovremennye metody analiza redkikh elementov; materialy k Pervomu mezhduvedomstvennomu soveshchaniiu po geologii, mineralogii i geokhimii redkikh elementov 10-18 aprelia 1956 goda. Moskva, 1956. 67 p. (MLRA 9:11)

1. Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii.
(Rare earth elements)

BOROVIK-ROMANOVA, Tat'yana Fedorovna; VINOGRADOV, A.P., akademik, otvetstvennyy redaktor; RAZUMOVA, L.L., redaktor izdatel'stva; ZEMLYAKOVA, T.A., tekhnicheskiy redaktor

[Spectrographic determination of alkali and alkaline earth elements (in water, plants, soils, and rocks)] Spektral'no-analiticheskoe opredelenie shchelochnykh i shchelochnozemel'nykh elementov (v vodakh, rasteniiakh, pochvakh i porodakh). Moskva, Izd-vo Akademii nauk SSSR, 1956. 183 p. (MIRA 9:12)

(Alkali metals) (Spectrum analysis)
(Alkaline earth metals)

VAYNSTEYN Emmanuil Yefimovich; VINOGRADOV, A.P., akademik, redaktor; RAZUMOVA, L.L., redaktor; MAKUNI, Ye.V., tekhnicheskiy redaktor.

[Methods of quantitative X-ray spectrum analysis] Metody kolichestvennogo rentgenospektral'nogo analiza. Moskva, Izd-vo Akademii nauk SSSR, 1956. 221 p. (MLRA 9:6)
(X-ray spectroscopy)

BARANOV, V.I.; VINOGRADOV, A.P., akademik, otvetstvennyy redaktor; SHTEYNBOK, G.Yu., redaktor izdatel'stva; KASHINA, P.S., tekhnicheskiy redaktor

[Measurement of radioactivity] Radiometriia. Izd. 2-oe, ispr. Moskva, Izd-vo Akademii nauk SSSR, 1956. 343 p. (MLRA 9:11)
(Radioactivity--Measurement)

VINOGRADOV, A.P.; CHUPAKHIN, M.S.; GRINENKO, V.A.; TROFIMOV, A.V., [deceased]

Isotopic composition of sulfur in connection with the age of pyrites of sedimentary origin. Geokhimiia no.1:96-105 '56. (MLRA 9:9)

1. Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo AN SSSR, Moskva.
(Sulfur--Isotopes)

[illegible] A. P.

[illegible] ratio deviates toward [illegible] An increase of
that the [illegible] of iron meteorites. Such an increase
[illegible]

VINOGRADOV,

VINOGRADOV, A.P.; DEVIRTS, A.L.; DOBKINA, E.N.; MARKOVA, N.G.; MARTISHCHENKO, L.G.

Using C^{14} to determine absolute age. Report no.1. Geokhimiia no.8:3-9 '56. (MIRA 10:2)

1. Institut geokhimii i analiticheskoy khimii im.V.I. Vernadskogo AN SSSR, Moskva.

(Radiocarbon dating)

[illegible]

Rumania/ Cosmochemistry. Geochemistry. Hydrochemistry D.

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11490

Author : Vinogradov A.P.
Title : Development Course of Geochemistry

Orig Pub : Caile de dezvoltare a geochimiei.
An. Rom.-Sov. Ser. chim., 1956, 10, No 1, 97-113 (Rumanian)

Abstract : Translation. See RZhKhim, 1956, 57821

1/1

ESMEYANOV, A.N.; TOPCHIYEV, A.V.; KURCHATOV, I.V.; SKOBEL'TSYN, D. .;
KAPITSA, P.B.; IOFFE, A.F.; VINOGRADOV, A.P.; ERENBURG, I.G.; TIKHONOV,
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VINOGRADOV, A.P., akademik.

The biological role of radioactive isotope, K^{40}. Dokl. AN SSSR 110 no.3:375-378 S '56. (MLRA 9:12)

1. Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo Akademii nauk SSSR.
(Potassium--Isotopes) (Radiobiology)

VAYNSHTEYN, Emanuil Yefimovich; VINOGRADOV, A.P., akademik, otvetstvennyy redaktor; RAZUMOVA, L.L., redaktor izdatel'stva; MAKUNI, Ye.V., tekhnicheskiy redaktor

[Apparatus of increased intensity and contrast for X-ray spectrum analysis; studies on the curves of crystals and new focusing spectrographs] Svetosil'naia apparatura dlia rentgenospektral'nogo analiza; issledovanie izgiba kristallov i novye fokusiruiushchie spektrografy. Moskva, Izd-vo Akad. nauk SSSR, 1957. 119 p. (MIRA 10:4)
(X-RAY SPECTROSCOPY)

VINOGRADOV, A.P.

SHATENSHTEYN, A.I., prof.; YAKOVLEVA, Ye.A., kand.khim.nauk; ZVYAGINTSEVA, Ye.N.; VARSHAVSKIY, Ya.M., kand.khim.nauk; IZRAILEVICH, Ye.A., kand.khim.nauk; DYKHNO, N.M., kand.khim.nauk; VINOGRADOV, A.P., akademik, otvetstvennyy red.; KHRISTIANOV, V.K., red.izd-va

[Isotopic analysis of water] Izotopnyi analiz vody. Izd. 2-oe. Moskva, Izd-vo Akad.nauk SSSR, 1957. 235 p. (MIRA 11:2)
(Water--Analysis) (Hydrogen--Isotopes)
(Oxygen--Isotopes)

VINOGRADOV, A.P.; SKLYARENKO, Yu.S., red.izd-va; KISELEVA, A.A., tekhn.red.

[Geochemistry of rare and scattered chemical elements in soils] Geokhimiia redkikh i rasseiannykh khimicheskikh elementov v pochvakh. Izd.2-oe, dop. Moskva, Izd-vo Akad.nauk SSSR, 1957. 237 p. (MIRA 11:1)

(Geochemistry)

VINOGRADOV, A.P.

STARIK, I.Ye., otvetstvennyy red.; SHCHERBAKOV, D.I., akademik, red.; BARANOV, V.I., prof., red.; SHATSKIY, N.S., akademik, red.; POLKANOV, A.A., akademik, red.; VINOGRADOV, A.P., akademik, red.; AFANAS'YEV, G.D., red.; GERLING, E.K. prof., red.; PEKARSKAYA, T.B., kand.geol.-min.nauk, red.; TUGARINOV, A.I., red.; CHERDYNTSEV, V.V., red.; POLYAKOVA, T.V., tekhn.red.

[Proceedings of the fourth session of the Commission for the Determination of the Absolute Age of Geological Formations, May 12-14, 1956] Trudy chetvertoi sessii Komissii po opredeleniiu absoliutnogo vozrasta geologicheskikh formatsii; 12-14 maia 1955 g. Moskva, 1957. 297 p.

(MIRA 11:1)

1. Akademiya nauk SSSR. Komissiya po opredeleniyu absolyutnogo vozrasta geologicheskikh formatsiy. 2. Chlen-korrespondent AN SSSR (for Starik, Afanas'yev).

(Geology, Stratigraphic)

VINOGRADOV, A. P.

KHLOPIN, V.G.; VINOGRADOV, A.P., akademik, redaktor; GRINBERG, A.A., redaktor; GREBENSHCHIKOVA, V.I., kandidat khimicheskikh nauk, redaktor; KLOKMAN, V.R., kandidat khimicheskikh nauk, redaktor; NIKITIN, B.A., redaktor [deceased]; PASVIK, M.A., kandidat khimicheskikh nauk, redaktor, [deceased]; RATNER, A.P., doktor khimicheskikh nauk, redaktor [deceased]; STARIK, I.Ye., redaktor; BROYTMAN, Ya.A., redaktor izdatel'stva; PEVZNER, R.S., tekhnicheskiy redaktor

[Collected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR. Vol.2. [Works on inorganic and analytic chemistry and on geochemistry] Trudy po neorganicheskoi i analiticheskoy khimii i po geokhimii. 1957. 306 p. (MLRA 10:8)

1. Chlen-korrespondent Akademii nauk SSSR (for Grinberg, Starik, Nikitin)
(Chemistry, Analytic) (Chemistry, Inorganic) (Geochemistry)

VINOGRADOV, A. P.

KHLOPIN, V.G.; NIKITIN, B.A. [deceased] otvetstvennyy redaktor; RATNER, A.P. [deceased] doktor khimicheskikh nauk, otvetstvennyy redaktor; VINOGRADOV, A.P., akademik, redaktor; GRINBERG, A.A., redaktor; GREBENSHCHIKOVA, V.I., kandidat khimicheskikh nauk, redaktor; KLOKMAN, V.R., kandidat khimicheskikh nauk, redaktor; PASVIK, M.A. [deceased] kandidat khimicheskikh nauk, redaktor; STARIK, I.Ye., redaktor; BROYTMAN, Ya.A., redaktor izdatel'stva; PEVZNER, R.S., tekhnicheskiy redaktor

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR. Vol. 1 [Works in the field of radiochemistry] Trudy v oblasti radiokhimii. 1957. 370 p. (MIRA 10:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Nikitin, Grinberg, Starik)

(Radiochemistry)

VINOGRADOV, A. P.

Vinogradov, A. P., Tugarinov, A. I., Zykov, S. I., Fedorova, V. A. - The Age Determination of Ukrainian Granitoids.

The Sixth Session of the Committee for Determining the Absolute Age of Geologic Formations at the Department of Geologic-Geographical Sciences (OGGN) of the USSR Academy of Sciences at Sverdlovsk in May 1957.

Izv. Ak Nauk SSSR, Ser. Geol., No. 1, 1958, p. 115-117 author Pekarskaya, T. B.

VINOGRADOV, A. P.

"The origin of the Biosphere," a paper presented at the International Symposium on the Origin of Life, Moscow, 19-24 Aug 1957.

VINOGRADOV, A. P.

"The isotopic composition of the S^{32}/S^{34} ratio of meteorites and of the earth," a paper submitted at the International Conference on Radioisotopes in Scientific Research, Paris, 9-20 Sep 57.

VINOGRADOV, A.P.; TARASOV, L.S.; ZYKOV, S.I.

Isotopic composition of lead in ores of the Altai and Kazakhstan [with summary in English]. Geokhimiia no.1:3-22 '57. (MIRA 12:3)

1. Vernadskiy Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, U.S.S., Moscow.
(Altai Territory--Lead--Isotopes)
(Kazakhstan--Lead--Isotopes)

VINOGRADOV, A.P.

11-4-9/23

SUBJECT: USSR/Metallurgy

AUTHOR: Vinogradov, A.P.

TITLE: "About the Reasons of High Titanium Contents in Bauxite" (In connection with the question of origin of bauxite) [O prichinakh vysokogo soderzhaniya titana v boksitakh (v svyazi o voprosom o genezise boksitov)]

PERIODICAL: "Izvestiya Akademii Nauk SSSR", Seriya Geologicheskaya, 1957, # 4, pp 98-103 (USSR)

ABSTRACT: A remarkable feature in the chemical composition of bauxites is the relative high content of titanium, which ranges from 1-5 %, in several instances up to 25 % and higher. Close examinations of the compositions of bauxites have shown that the percentage of a number of other elements found in bauxites (Be, Ga, Th, Zr, Hf, Nb, Ta, Fe) are also higher than the mean contents in rocks. This entire group together with Ti and Al has the property to form insoluble deposits at hydrolysis at low pH concentrations. Consequently, these elements, which form hydrate deposits in the hypergenesis zone, are frequently tied up with Al. Since the content of Al, Ti, Zr, Nb and other elements in natural solutions, as in the waters of rivers etc. is negli-

Card 1/2

11-4-8/23

TITLE: "About the Reasons of High Titanium Contents in Bauxite"
(In connection with the Question of Origin of Bauxite)
(O prichinakh vysokogo soderzhaniya titana v boksitakh)
(v svyazi c voprosom o genezise boksitov)

gible, and due to low mobility of Ti, selective extraction does not occur. Therefore, the high content of Ti in Al is a result of slow extraction of hydrates of SiO_2 from disintegrated rocks by ordinary water solutions with a pH concentration of approx 7, leaving high concentrations of Al and Ti in the residual rocks.
The article contains 2 diagrams, and 3 tables. The bibliography lists 12 references, of which 6 are Slavic (Russian.)

ASSOCIATION: Institute of Geochemistry and Analytic Chemistry Imeni V.I. Vernadskiy Academy of Sciences USSR, Moskva.

PRESENTED BY:

SUBMITTED: October 13, 1956

AVAILABLE: At the Library of Congress.

Card 2/2

VINOGRADOV, A.P.

VINOGRADOV, A.P.

Essay on the development of geochemistry in the U.S.S.R. [with summary in English]. Geokhimiia AN SSSR no.6:439-442 '57. (MIRA 11:2)
(Geochemistry)

VINOGRADOV, A.P.

VINOGRADOV, A.P.; ZADOROZHNYY, I.K.; FLORENSKIY, K.P.

Inert gases content in the Sikhote-Alin' meteorite. Geokhimiia AN SSSR no.6:443-448 '57. (MIRA 11:2)

1. Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR, Moskva.
(Sikhote-Alin'--Meteorites) (Gases, Rare)

VINOGRADOV, A.P.; TUGARINOV, A.I.; FEDOROVA, V.A.; ZYKOV, S.I.

Age of pre-Cambrian rocks of the Ukraine [with summary in English] Report no.3 Geokhimiia no.7:559-565 '57. (MIRA 11:1)

1. Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR, Moskva.
(Ukraine--Geology, Stratigraphic) (Nuclear geophysics)

[illegible] A P

VINOGRADOV, A. P.

B-1

USSR/General Biology - Physical and Chemical Biology

Abs Jour : Ref Zhur - Biol., No 3, 1958, No 9412

Author : Vinogradov, A.P.

Inst : Not Given

Title : K^{40} and its Biological Role

Orig Pub : Biokhimiya, 1957, 22, No 1-2, 14-20

Abstract : Experiments with addition of K^{40} to Aspergillus niger nutrient medium showed that it affects the growth of fungus mycelium exactly as does K39. The radioactivity of K^{40} is not responsible for any biological reactions or processes not only in lower, but also in higher plants. Experiments with perfusion of Ringer's solution, containing K^{40} or K39, through the heart, showed that the character of heart muscle contraction depends only on the total content of K and not on the quantity of K^{40} in the perfused solution.

Card : 1/1

[redacted]
20-2-20/67

The Biological Rôle of the K40 Radioactivity in Animals.
(3 illustrations, 1 schedule, 2 citations from publications)

ASSOCIATION	Institute for Geochemistry and Analytical Chemistry "VERNADSKIY, V.I." of the Academy of Science of the U.S.S.R.
PRESENTED BY	
SUBMITTED	1.12.1956
AVAILABLE	Library of Congress.

Card 2/2

VINOGRADOV A P

4223 BIOLOGICAL ROLE OF POTASSIUM 40. A. P. Vinogradov. Nature 179, 308-9(1957)

VINOGRADOV A.P.

Some data on the isotopic compo S. Churakhin, and V. A.

VINOGRADOV, A.P.

7-1-11/12

AUTHOR: Krinov, Ye. L.

TITLE: Chronicle: International Conference on Interplanetary Matter (Khronika: Mezhdunarodnaya Konferentsiya po mezhplanetnoy materii)

PERIODICAL: Geokhimiya, 1958, Nr 1, pp. 96-96 (USSR)

ABSTRACT: The International Congress on Interplanetary Matter took place at Jena, German Democratic Republic from October 7 to October 12, 1957. It was organized by the German Academy of Sciences. About 100 representatives of 11 countries took part in it. The Soviet Union was represented by Ye. L. Krinov, Scientific Secretary of the Comittee for Meteorite Science of the AN USSR, by the Scientific Assistant of this comittee L. G. Kvasha, and by V. S. Safronov, Scientific Assistant of the Institute for Geophysics of the AN USSR.

The Soviet delegation gave ten of the thirty reports heard there:

V. G. Fesenkov, Member of the AN USSR: The Northern Zodiacal Light

V. G. Fesenkov, Member of the AN USSR: The Pressure Wave at the Fall of the Tungusska Meteor in 1908

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Chronicle: International Conference on Interplanetary Matter 7-1-11/12

Ye. L. Krinov: The Mechanism of the Destruction of Meteoric Bodies in the Atmosphere, and Their Original Forms
L. G. Kvasha: Certain Types of Stone Meteors
B. Yu. Levin: On the History of the Investigation of the Variation of Meteorite Frequency
B. Yu. Levin: The Origin of Meteors and Comets
A. P. Vinogradov, Member of the AN USSR, I. K. Zadorozhnyy and K. P. Florenskiy: The Contents of Inert Gases in the Sikhote-Alin Iron Meteor (published in GC, 1957, no. 6)
N. N. Pariyskiy and L. M. Gindilis: Investigation of the Luminiscence of the Green Band 5577 in the Night Sky in the Counter-Glow Region (Issledovaniye svecheniya zelenoy linii 5577 nochnogo neba v oblasti protivosiyaniya)
I. S. Shklovskiy: The State of Ionization of Interplanetary Gas and Its Significance for Certain Geophysical Problems

The conference decided to publish all reports in special editions of the following periodicals:

Astronomical reports in: "Die Sterne";

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Chronicle: International Conference on Interplanetary Matter 7-1-11/12

Reports on the material consistency of meteorites in: "Chemie der Erde".

AVAILABLE: Library of Congress

1. Reports-Bibliography 2. USSR

Card 3/3

VINOGRADOV, A.P.

BUSEV, Aleksey Ivanovich; VINOGRADOV, A.P., akademik, otvetstvennyy red.;
LEVI, T.G., red.izd-va; SIMKINA, Ye.N., tekhn.red.

[Analytic chemistry of indium] Analiticheskaia khimiia indiia.
Moskva, Izd-vo Akad.nauk SSSR, 1958. 242 p. (MIRA 11:6)
(Indium)

VINOGRADOV, A.P.

5(2) PHASE I BOOK EXPLOITATION SOV/1727

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii

Redkozemel'nyye elementy; polucheniye, analiz, primeneniye (Rare Earth Elements; Extraction, Analysis and Application) Moscow, Izd-vo AN SSSR, 1958. 331 p. 2,200 copies printed.

Resp. Ed.: D. I. Ryabchikov, Professor; Editorial Board: I. P. Alimarin, Corresponding Member, USSR Academy of Sciences, I. N. Zaozerskiy, Doctor of Chemical Sciences, R. V. Koglyarov, Candidate of Technical Sciences, V. I. Kuznetsov, Doctor of Chemical Sciences, M. M. Senyavin, Candidate of Chemical Sciences, and Yu. S. Sklyarenko, Candidate of Chemical Sciences; Eds. of Publishing House: D. N. Trifonov and T. G. Levi; Tech. Ed.: S. G. Markovich.

PURPOSE: This book is intended for scientists, chemists, teachers and students of higher educational institutions, chemical and industrial engineers, and other persons concerned with the extraction, preparation, use, or study of rare earth elements.

COVERAGE: This collection contains reports presented at the June 1956 Conference on Rare Earth Elements at the Institute of Geochemistry and Analytical Chem-

Card 1/11

istry imeni V. I. Vernadskiy of the Academy of Sciences USSR. The articles treat chemical methods of separating rare earth mixtures, methods of processing rare earth ores, ion exchange chromatography, chemical analysis, and some industrial applications of rare earths. Aside from contributing authors, the editors mention the following Soviet scientists, who are studying rare earth elements, rare earth deposits, extraction methods, and the preparation of oxides and salts: Martynov, Mel'nikov, Khrushchev, Melikov, Pisarzhevskiy, Chernyak, Tanatar, Belousov, Zhukov and especially, N. A. Orlov, who first obtained the majority of rare earth elements in the pure state, separated many complex molecular compounds of these elements, and determined their specific properties. References are given at the end of each article.

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Gerasimovskiy, V. I. (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AS USSR). Geochemistry of Rare Earth Elements 29

Volkova, M. I. (Kol'skiy filial imeni S. M. Kirova AN SSSR [Kol'skiy Branch of the Academy of Sciences imeni S. M. Kirov USSR]). Reasons for Fluctuation in the Specific Weight of Khibiny Apatites 42

Zaozerskiy, I. N., and P. N. Patkin (Giredmet [State Rare Metals Scientific Research Institute]). Separation of Cerium From Rare Earth Elements and Obtaining It in the Pure State 48

Kotlyarov, R. V., and G. P. Kozhemyako (State Rare Metals Scientific Research Institute). Application of Binary Sulfates for the Separation of Rare Earth Elements Into Subgroups and Preparation of High Percentage Concentrates of Some Elements of the Yttrium Subgroup 55

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Rare Earth Elements; Extraction (Cont.)

Nikolayev, A. V., A. A. Sorokina, A. S. Maslennikova (Moskovskiy institut tsvetnykh metallov i zolota imeni M. I. Kalinina [Moscow Institute for Non-Ferrous Metals and Gold imeni M. I. Kalinin]). Research in the Field of Chemistry and the Separation of Rare Earth Elements (Extraction of Ce, La, Pr, and Nd Concentrates and Heavy Rare Earth Elements) 68

Andreyeva, Z. F. (Moskovskaya sel'skokhozyaystvennaya akademiya imeni K. A. Timiryazeva, Kafedra neorganicheskoy khimii [Moscow Agricultural Academy imeni K. A. Timiryazeva, Faculty of Inorganic Chemistry]). Separation of Elements of the Yttrium Group According to Basicity 76

Andreyeva, Z. F., and P. N. Patkin. Preparation of Pure Yttrium 80

Aleksandrov, B. P. (Institut geologii poleznykh iskopayemykh AN USSR [Institute for Mining Geology, Ukrainian SSR) Nickel Nitrite Complexes and Their Role in Separating Quantities of Rare Earth Elements Into Subgroups 84

Senyavin, M. M., and F. D. Iozefovich. Chromatographic Separation of Rare Earth Mixtures on a Large Scale 91

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Rare Earth Elements; Extraction (Cont.) SOV/1727

Andreyeva, Z.F., T.V. Lishchenko, N.V. Bredenfel'd, and O. I. Rozhdestvenskaya (State Rare Metals Scientific Research Institute and Moscow Agricultural Academy imeni K. A. Timiryazev), Trilon B in the Ion Exchange Separation of Less Common Rare Earth Elements 100

Andreyeva, Z.F., and A.S. Kostygov (Moscow Agricultural Academy imeni K. A. Timiryazev and State Rare Metals Scientific Research Institute), Characteristics of Trilon A and Trilon B in the Ion Exchange Separation of Elements in the Cerium Subgroup 108

Martynenko, L. I. (Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova, Khimicheskiy fakul'tet [Moscow State University imeni M. V. Lomonosov, Facuty of Chemistry]). Some Problems of the Chromatographic Separation of Rare Earth Elements 112

Dodonov, Ya. Ya., V. P. Khramov, and V. S. Kolosova (Saratovskiy gosudarstvennyy universitet imeni N. G. Chernyshevskogo; Saratovskiy institut mekhanizatsii sel'skogo khozyaystva [Saratov State University imeni N.G. Chernyshevskiy and Saratov Institute for the Mechanization of Agriculture]). Experiment on the Separation of Elements of the Cerium Subgroup in Cationite

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Rare Earth Elements; Extraction (Cont.) SOV/1727

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Cherneva, Ye. P., N. N. Tunitskiy, and V. V. Nekrasov (Fizikokhimicheskiy institut imeni L. Ya. Karpova [Institute of Physical Chemistry imeni L.Ya. Karpov]), Separation of Rare Earth Elements by the Countercurrent Chromatographic Method 129

Kolosova, G.M., and M.M. Senyavin (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR), Separation of Rare Earth Elements in Anionites 138

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Alimarin, I.P., and F.I. Pavlotskaya (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR). Separation of Rare Earth Elements in the Form of Oxalates and Fluorides With the Presence of Large Amounts of Other Elements 162

Zolotavin, V.L., and L.K. Ponomareva (Ural'skiy politekhnicheskiy institut imeni S.M. Kirova [Ural Polytechnic Institute imeni S.M. Kirov). A Quick Method of Determining Cerium in Loparite 176

Ambrozhiy, M.N. (Saratov State University imeni N.G. Chernyshevskiy). The Problem of Chemically Controlling the Purity of Compounds of Rare Earth Elements in the Cerium Subgroup 179

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Rare Earth Elements; Extraction (Cont.)

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Vaynshteyn, E.Ye., I.F. Stauberg, and A.T. Mosal'skiy (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR). Application of X-ray Spectroscopic Analysis for Control of the Industrial Process of Producing Individual Rare Earth Elements 217

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Rare Earth Elements; Extraction (Cont.)

Zaydel', A.N., N.I. Kaliteyevskiy, and A.N. Razumovskiy (Leningradskiy gosudarstvennyy universitet, Nauchno-issledovatel'skiy fizicheskiy institut · [Leningrad State University, Scientific Research Institute for Physical]). Spectrochemical Determination of Gd, Eu, and Sm in Atomic Materials. Part I. Principle of the Method and Its Application in the Analysis of Beryllium 239

Zaydel', A.N., N.I. Kaliteyevskiy, A.N. Razumovskiy, and P.P. Yakimova (Leningrad State University, Scientific Research Institute for Physics). Spectrochemical Determination of Gd, Eu, and Sm in Atomic Materials. Part II. Analysis of Thorium and Uranium 251

Zaydel', A.N., and A.A. Lipovskiy (Leningrad State University, Scientific Research Institute for Physics). Spectrochemical Determination of Gd, Eu, and Sm in Atomic Materials. Part III. Analysis of Zirconium and Bismuth in Gd 258

Grishina, T.I. (Moscow State University imeni M.V. Lomonosov). Determination of Small Admixtures of Rare Earths in High-Purity Rare Earth Preparations by Spectral Emission Analysis 266

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Rare Earth Elements; Extraction (Cont.)

Peshkova, V.M., M.I. Gromova, I.P. Yefimov, and N. A. Kanayev (Moscow State University imeni M.V. Lomonosov, Faculty of Chemistry). Spectrophotometric Investigation of Complex Compounds of Rare Earth Elements 277

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Tsoy, R.I., Yu.M. Tyurin, and Yu.A. Brodskiy (Steklozavod imeni F.E. Dzerzhinskogo - [Glass Plant imeni F.E. Dzerzhinskiy). Application of "Polirit" [Poli-rite] for Polishing Glass on a Conveyer of the Plant imeni F. E. Dzerzhinskiy 295

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SOV/1727

Rare Earth Elements; Extraction (Cont.)

Tolstopyatova, A.A., and A.A. Balandin (Institut organicheskoy khimii AN SSSR [Institute of Organic Chemistry AS USSR]). Rare Earth Elements as Catalysts in Organic Chemistry. Oxides of Cerium, Lanthanum, and Samarium 307

Levshin, V.L., M.A. Konstantinova, and Z.A. Trapeznikova (Fizicheskiy institut imeni P.N. Lebedeva AN SSSR -[Physical Institute imeni P. N. Lebedev AS USSR]), Application of Rare Earth Elements in the Chemistry of Luminophores 314

Tikhova, N.M., and V.A. Blokhina (VIAM-All-Union Scientific Research Institute of Aviation Medicine). The Use of Rare Earths For Alloying Magnesium Cast Alloys 323

AVAILABLE: Library of Congress (QD172, R2A38)

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6-13-59

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STARIK, I.Ye., otv. red.; SHCHERBAKOV, D.I., akad., red.; VINOGRADOV, akad., red.; SHATSKIY, N.S., akad.,red.; POLKANOV, A.A., akad., red.; AFANAS'YEV, G.D., red.; BARANOV, V.I., prof.,red.; PEKARSKAYA, T.B., kand. geol.-miner. nauk, red.; IVANOV, B.V., red. izd-va.; RYLINA, Yu.V., tekhn. red.

[Proceedings of the fifth session of the Commission to Determine the Absolute Age of Geological Formations] Komissiia po opredeleniiu absoliutnogo vozrasta geologicheskikh formatsii. Trudy piatoi sessii...; 19-23 maia 1956 g. Moskva, 1958. 367 p. (MIRA 11:11)

1. Akademiya nauk SSSR. Komissiya po opredeleniyu absolyutnogo vozrasta geologicheskikh formatsii. 2. Chlen-korrespondent AN SSSR(for Starik, Afanas'yev).

(Geological age)

VINOGRADOV, A.P., akademik, red.; KONDRAT'YEV, V.N., akademik, red.;
ALIMARIN, I.P., red.; BAKH, N.A., doktor khim. nauk, red.;
NIKOLAYEV, A.V., red.; NEKRASOVA, G.A., kand. khim. nauk, red.
MAKUNI, Ye.V., tekhn. red.

[Isotopes and radiation in chemistry; papers at a conference]
Izotopy i izlucheniia v khimii; trudy konferentsii. Moskva,
Izd-vo Akad. nauk SSSR, 1958. 380 p. (MIRA 11:8)

1. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke. 2d, Moscow, 1957. 2. Chlen-korrespondent Akademii nauk SSSR (for Alimarin).
(Isotopes) (Radiation)

VINOGRADOV, A. P., Mbr., Acad. of Sci., USSR

""To Drop the Certification of the Age Determinations Practiced by the Commission for Determination of the Absolute Age of Geological Formations."

report presented at the 7th Session of the Commission for Determination of the Absolute Age of Geological Formations, at the Dept. Geological-Geographical Sciences, AS USSR, Moscow, 8-12 May 1958.

7-58-3-1/15

AUTHORS: Vinogradov, A. P., Dontsova, Ye. I., Chupakhin, M. S.

TITLE: The Isotopic Composition of Oxygen in Igneous Rocks and Meteorites (Izotopnyy sostav kisloroda izverzhennykh porod i meteoritov)

PERIODICAL: Geokhimiya, 1958, Nr 3, pp. 187 - 190 (USSR)

ABSTRACT: In the beginning the previous works concerning the O^{16}/O^{18}-ratio in igneous rocks and meteorites are mentioned; they supplied only insufficient results since the methods were not precise and various standards were used. The authors investigated the O^{16}/O^{18}-ratio in meteorites (pallasites and chondrites), in ultrabasic (dunnites), basic (basalts), and acid rocks (granites). A quartz from Neroyka, Polyarnyy Ural served as standard. The oxygen was reduced to CO with graphite at 2100°, the CO was investigated mass-spectrometrically. The method was discussed in a previous paper (Ref 7). The ratio of the oxygen isotopes was determined in 17 samples; all results are given in a big table. The ratio was calculated according to the following formula:

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7-58-3-1/15

The Isotopic Composition of Oxygen in Igneous Rocks and Meteorites

$R = R_{st}(1 - \frac{\Delta}{100})$ Δ = difference in the ratio of oxygen isotopes between sample and standard (in %). R_{st} = O^{16}/O^{18}-ratio in the standard; R = O^{16}/O^{18}-ratio of the sample. The obtained values deviate least in meteorites. For chondrites and pallasites the ratio of isotopes is equal; this points out their genetic relations. The ratio of the oxygen isotopes of olivine in chondrites can perhaps serve in future as standard in geochemical research. The increase of the O^{18}-content from meteorites to granites and finally to quartz is of greatest importance. The ratio of oxygen isotopes in the silicate phase of meteorites and in the ultrabasic rocks differs only to a small extent. That all permits the final conclusion that the material of the earth cover, which corresponds in its composition almost to the silicate phase of the meteorites, is changed by the formation of the earth crust. These changes are accompanied by an exchange of oxygen isotopes. There are 1 table and 8 references, 3 of which are Soviet.

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The Isotopic Composition of Oxygen in Igneous Rocks and Meteorites 7-58-3-1/15

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo, AN SSSR, Moskva (Moscow, Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, AS USSR)

SUBMITTED: March 8, 1958

1. Oxygen isotopes--Analysis 2. Mass spectrum analyzers--Applications 3. Rock--Properties 4. Meteorites--Properties

Card 3/3

89-4-5-1/26

AUTHOR: Vinogradov, A. P.

TITLE: Isotopic Composition of Terrestrial and Meteoritic Rocks (Izotopnyy sostav porod Zemli i meteoritov)

PERIODICAL: Atomnaya Energiya, 1958, Vol 4, Nr 5, pp [illegible] - 416 (USSR)

ABSTRACT:

This is the abstract of a report that was given by the author at the International Conference for the Application of Radioactive Isotopes for Scientific Research in September 1957 in Paris. Particularly, a report is given on the measured contents of sulfur, oxygen and carbon and on the content of light gases in iron meteorites, iron-stone meteorites, and stone meteorites. These results which are taken from various sources are compared with the respective percentage of the mentioned elements in the earth's crust.

The author tries to draw some conclusions for the field of geochemistry and cosmic chemistry from this comparison. The process of isotopic separation for example can be regarded as a consequence of the differentiation of the matter of the earth. As no isotopic separation is observed in meteorites the

89-4-5-1/26

Isotopic Composition of Terrestrial and Meteoritic Rocks

author concludes that there no differentiation of matter takes place. Moreover the author thinks his conclusion to be justified that all kinds of meteorites are formed as a consequence of an accumulation of primary cosmic dust. There are 4 figures and 5 tables.

SUBMITTED: January 30, 1958

AVAILABLE: Library of Congress

1. Meteorites--Analysis 2. Meteorites--Origin--Theory

Card 2/2

AUTHORS: Vinogradov, A. P., Vaynshteyn, E. Ye., Pavlenko, ~~L. I.~~ SOV/7-58-5-1/15

TITLE: Tungsten and Molybdenum in Pyrogenous Rocks (On the Geochemistry of Tungsten)(Vol'fram i molibden v izverzhennykh gornykh porodakh (k geokhimii vol'frama))

PERIODICAL: Geokhimiya, 1958, Nr 5, pp 399 - 408 (USSR)

ABSTRACT: The authors briefly discuss the geochemistry of molybdenum and tungsten. The method of analysis is then described: Molybdenum and tungsten are precipitated by means of methyl-violet and are determined in 2 parts by the spectrographs Qu-24 and ISP-51A respectively. The calibration curve and the results obtained from the analysis carried out for purposes of control were set forth. The objects of investigation were ultra-basic rocks of the Ural-Mountains and of the Siberian Plateau, basic rocks from basalts and diabases of Kamchatka, **of the Caucasus and Baykal region** different kinds of gabbros, intermediary rocks such as granodiorites and diorites of the **Caucasus,** acid rocks such as granites of the **Caucasus area,** of **Kazakhstan and of the Baykal region.** The results of the spectroscopic analysis are classified in tables for the individual

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Tungsten and Molybdenum in Pyrogenous Rocks (On the Geochemistry of Tungsten) SOV/7-58-5-1/15

types of rocks, a diagram illustrates the varying percentage of tungsten and molybdenum with an increasing percentage of silic acid. Hence it is concluded that: 1) The percentage of tungsten in pyrogenous rocks rises from ultrabasic ($7,7\cdot10^{-5}\%$) to acidic rocks ($2,4\cdot10^{-4}\%$) parallel with the percentage of molybdenum (from ($2,3\cdot10^{-5}\%$ to $1,6\cdot10^{-4}\%$) in other words it develops according to the percentage of silicic acid. The percentage of tungsten is 1,5 to 2 times higher than that of molybdenum. Only basic rocks form an exception; still, it must be found out whether this is a general rule. 2) The mean percentage of tungsten is estimated at $2\cdot10^{-4}\%$ and that of molybdenum at $1,5\cdot10^{-4}\%$ in the crust of the earth; the mean proportion of molybdenum and tungsten is close to 0,7 in the crust of the earth. A minor test was also carried out with sedimentary rocks. A mixed sample was produced and investigated, which was taken of 7614 samples of clay of different ages which came from the Russian Plateau($7,4\cdot10^{-5}\%$ Mo and $1,8\cdot10^{-4}\%$ W); as well as of mixed samples of 6107 samples of sand ($4\cdot10^{-5}\%$ Mo and $1,6\cdot10^{-4}\%$ W). The samples were taken by A.B.Ronov. There are 2 figures,

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Tungsten and Molybdenum in Pyrogenous Rocks (On the Geochemistry of Tungsten) SOV/7-58-5-1/15

8 tables, and 22 references, 9 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im.V.I.Vernadskogo AN SSSR, Moskva (Moscow Institute of Geochemistry and Analytic Chemistry imeni V.I.Vernadskiy, AS USSR)

SUBMITTED: June 6, 1958

Card 3/3

3(8)

SOV/7-58-6-1/16

AUTHORS: Vinogradov, A. P.; Zykov, S. I.
Tarasov, L. S.

TITLE: Isotopic Composition of Lead Impurities in Ores and Minerals as an Indicator for the Determination of Their Genesis and Time of Formation (Izotopnyy sostav svintsa-primesi v rudakh i mineralakh kak pokazatel' ikh genezisa i vremeni obrazovaniya)

PERIODICAL: Geokhimiya, 1958, Nr 6, pp 515 - 523 (USSR)

ABSTRACT: Samples of Chalcopyrite, pyrite, pyrrhotine, sphalerite, galenite and ore samples of different composition were investigated, as well as quartz, scheelite, tungstenite and cassiterite. The isotopic ratio in lead was determined by a mass spectrograph (method according to Ref 4). The chemical and pyrochemical preparation for mass spectrographical analysis was made by Ye. B. Yevdokimova. The following samples were investigated: 27 from the Rudnyy Altay (Table 1), 9 from the Kalba-Narymskiy rayon (Table 2), 3 from the Gornyy Altay (Table 3), 7 from northern Central Siberia (Table 4) and 5 from the Kola peninsula. Some samples were put at the authors' disposal by: T. V. Zorova,

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Isotopic Composition of Lead Impurities in Ores and Minerals as an Indicator for the Determination of Their Genesis and Time of Formation

SOV/7-58-6-1/16

V. L. Barsukov (GEOKhI), O. M. Chirko, Mineralogicheskiy muzey imeni A. Ye. Fersmana AN SSSR (Mineralogical Museum imeni A. Ye. Fersman, AS USSR) and O. Ye. Yushko-Zakharova. The tables and the third chapter contain a mineralogical classification and geological information on the investigated stages. The isotopic ratio in the mineralizations of Kalba and Gornyy Altay which is almost identical refer clearly to a genetic unity and contemporaneous formation. The Pechenga ores are probably Proterozoic, certainly not Caledonian. Cassiterite has an anomalous ratio of isotopes. It is due to inclusions of radioactive minerals, e.g. columbite. There are 5 tables and 11 references, 11 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy, AS USSR, Moscow)

SUBMITTED: July 15, 1958

Card 2/2

VINOGRADOV, A-P.

SOV/30-58-7-15/49

AUTHOR: None Given

TITLE: Co-Operation of Scientists in the Struggle Against Atomic War
(Sotrudnichestvo uchenykh v bor'be s opasnost'yu yadernoy Canada
voyny) On the Results Obtained at the Conference in Lac Beauport/,
(K itogam konferentsii v Lak-Boporte)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 7, pp. 82 - 85 (USSR)

ABSTRACT: This international conference took place in Lac Beauport,Canada
province of Quebec (Kvebek) March 31 to April 11. The
aim of the scientists from Australia(Avstraliya), Canada, the
Chinese People's Republic (Kitayskaya Narodnaya Respublika),
France (Frantsiya), Germany (Germaniya), Great Britain (Veliko-
britaniya), USSR (SSSR), USA(SShA) attending this conference, was
to determine acceptable means for reducing the danger of war for
all countries and to reduce the tensions in international re-
lations. Amongst others, Professor Chou Pei-yuan of the Chinese
People's Republic, Professor A.M.Kuzin, the members, Academy of
Sciences, USSR, D.V.Skobel'tsyn, A.V.Topchiyev, A.P.Vinogradov
took part in this conference. In 1955, a declaration signed by

Card 1/4

Co-Operation of Scientists in the Struggle Against SOV/30-58-7-15/49
Atomic War. On the Results Obtained at the Conference in **Lac Beauport**

Bertrand Russell (Bertran Rassel), Albert Einstein (Al'bert Eynshteyn) and 9 other scientists, in which attention was drawn to the danger involved in the production of arms of mass extermination and which contained an appeal to call a conference of scientists, was published. Such a conference which was attended by 22 scientists, was called in July 1957 in **Pugwash**, Canada, province of **Nova Scotia** (Novaya Shotlandiya). A declaration was published and a permanent committee in which D.V.Skobel'tsyn also took part, was established. This permanent committee decided at a session in London in December last year, to call a conference **in Lac Beauport**. The discussion dealt with 3 principal problems: The danger of the present situation, the means for reducing the immediate danger and the means for reducing tensions. The Permanent Committee proposed - which was approved - to call a conference in Austria in September of this year which ought to deal with the problem of peace in the atomic age. A.V.Topchiyev reported on the conference **in Lac Beauport at a** meeting of the **Presidium**, AS USSR, on May 9. At this conference, the Soviet Scientists spoke about the following problems:

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Co-Operation of Scientists in the Struggle Against SOV/30-58-7-15/49
Atomic War. On the Results Obtained at the Conference in Lac Beauport

1)A.V.Topchiyev: On the Present Situation and the Tasks of Scientists; on an International Scientific Exchange.
2)A.P.Vinogradov: On the Cessation of the Tests With Atomic Weapons of All Types.
3)D.V.Skobel'tsyn: On Remarks Concerning the Armaments Race and Disarmament.
4)A.M.Kuzin:How the Present Danger Is Judged by a Biologist.
Concluding, Topchiyev said that the most important reports of the conference were forwarded to the heads of 15 States and to the General Secretary of the UNO..A.P.Vinogradov, and D.V.Skobel'tsyn completed the report delivered by Topchiyev. The Presidium, AS USSR,approved the activity displayed by the Soviet Delegates.

Card 3/4

VINOGRADOV, A P

SOV-26-58-8-34/51

AUTHOR: None Given

TITLE: Lectures (Delivered) by Soviet Scientists at the Brussels Exhibition (Lektsii sovetskikh uchenykh na Bryussel'skoy vystavke)

PERIODICAL: Priroda, 1958, Nr 8, p 116 (USSR)

ABSTRACT: In August 1958, the greatest Soviet scientists will deliver lectures on the achievements of science in the USSR at the Brussels Fair. In the field of natural sciences the following will lecture: the academicians Semenov, N.N. on Chain Reactions in Chemistry, V.N. Kondrat'yev on Soviet Works on Mass-Spectroscopy, A.P. Vinogradov on the Biochemistry of Isotopes, A.V. Shubnikov on the Growth of Crystals, N.S. Shatskiy on the Tectonic Map of the USSR, A.I. Oparin on the Present State of the Problem on the Origin of Life, Tsitsin, N.V. on Problems of Distant Hybridization, I.V. Tyurin on Soils of the Soviet Union and their Utilization. The following lectures will be delivered by correspondent-members AS USSR N.M. Emanuel' on New Investigations in the Field of Chain Reactions, Andrianov, K.A. on Silicoorganic Compounds, Ye.K. Zavoyskiy on Phenomena of Electron Paramagnetic Resonance, I.M. Frank on the Application of Atomic Energy for Peaceful Purposes, V.I. Popkov on a Unique Ener-

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SOV-26-58-8-34/51

Lectures (Delivered) by Soviet Scientists at the Brussels Exhibition

getic System in the USSR. The delivered lectures will be available in English, French, Flemish and German as individual brochures.

1. Scientific Reports--USSR 2. Scientific personnel--Performance
3. Scientific personnel--USSR

Card 2/2

VINOGRADOV, A.P.

3o-1-12/39

AUTHOR: Vinogradov, A. P., Academician

TITLE: The Conference Concerning the Utilization of Radioactive Isotopes in Scientific Research (Na konferentsii po ispol'zovaniyu radioizotopov v nauchnykh issledovaniyakh)

PERIODICAL: Vestnik AN SSSR, 1958, Vol. 28, Nr 1, pp. 71-78 (USSR)

ABSTRACT: This conference took place from September 9, to September 2o, 1957 in Paris and had been convened by the UNESCO. It was attended by 15oo scientists from 5o countries. The head of the Soviet delegation was A. V. Topchiyev; the Soviet delegation submitted 46 reports, which are dealt with. All other reports were from Western countries. The conference program was divided into two sections: A physical and a biological section. In the physical section, to which also the author belonged, discussions wereheld on physics, chemistry, metallurgy, geophysics, etc. The greatest attention was paid at this conference to the reports concerning the obtaining of radioactive isotopes, the production of radioactive sources, measuring technique and methods. V. L. Karpov, on behalf of the collective of the scientific Physical-Chemical Research Institute imeni L.

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30-1-12/39

The Conference Concerning the Utilization of Radioactive Isotopes in Scientific Research

Ya. Karpov (Kollektiv nauchno-issledovatel'skogo fiziko-khimicheskogo instituta imeni L. Ya. Karpova) reported on the establishment of a γ-ray source of high efficiency. K. K. Aglintsev discussed basic problems of measuring dosage. N. A. Perfilov and his collaborators reported on the production of a finelygrained emulsion for nuclear research. P. L. Gruzin, I. N. Frantsevich, A. A. Zhukhovitskiy, V. T. Borisov, S. Z. Bokshteyn and others submitted data concerning the diffusion and electric transmission of carbon in iron and its alloys. A. N. Murin reported on the diffusion kinetics with respect to the melts of salts, oxides, and sulphides. The method of autoradiography for the determination of non-metallic inclusions in iron alloys was dealt with by Z. Bojarskiy and for the purpose of investigating wear in connection with the structure of alloys, iron-, chromium-, and tungsten-carbides - L. S. Palatnik. V. I. Spitsyn gave information concerning the structure of heteropoly compounds, especially of phosphorus wolframates, and pointed out the great mobility of oxygen- and hydrogen atoms in them. Ye. Ye. Finkel'reported on the original and very simple method

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The Conference Concerning the Utilization of Radioactive Isotopes in Scientific Research 30-1-12/39

of applying marked atoms in the field of physical and chemical processes. M. A **Starikovich** spoke about the results obtained by investigations with marked atoms as regards the distribution of many salts between water and steam. In reports delivered by E. Ye. Vaynshteyn, L. Ye. Pavlenko and Yu I. Belyayev the application of radioactive isotopes in spectral analysis was dealt with. S. S. Medvedev spoke about problems of the polymerization of ethylene in its gaseous and liquid phase. E. K. Gerling's report on the migration of isomerism K^{38} in nature was read out. V. I. Baranov and L. A. Kuz'min submitted material on the determination of the velocity of the formation of salt on the bottom of the ocean. The author reported on the isotope composition of the milieu of meteorites, rocks, sulphides, etc. On the strength of these data he expressed the idea concerning the difference in processes of creation of various classes of meteorites and various types of the crust of the earth

AVAILABLE: Library of Congress

Card 3/3 1. Isotopes (Radioactive)-Applications

VINOGRADOV, A. P.

"Major Problems of Radiochemistery."

report presented at the Planary Session, 8th Mendeleyev Congress, Moscow, 14-18 Mar 59.

PHASE I BOOK EXPLOITATION SOV/4584

Vinogradov, Aleksandr Pavlovich, Academician

Osnovnyye problemy radiokhimii; doklad na VIII Mendeleyevskom s"yezde po obshchey i prikladnoy khimii (Basic Problems in Radiochemistry; Paper Read at the 8th Mendeleyev Conference on General and Applied Chemistry) Moscow, Izd-vo AN SSSR, 1959. 11 p. 10,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

No contributors mentioned.

PURPOSE: This booklet is intended for chemists and other scientific personnel interested in recent progress in radiochemistry.

COVERAGE: The booklet reviews the progress of radiochemistry during the last 25 years. The author points out the importance of radiation sources in geology, particularly in prospecting for petroleum, and in defectoscopy. He discusses the role of excited particles in radiochemical processes and in the synthesis of compounds from elementary gases, radiochemical methods of polymerizing certain organic compounds, and the utilization of radiation in catalysis. He points out that investigation of the natural radioactive

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Basic Problems (Cont.) SOV/4584

elements and of nuclear transmutations taking place in the earth is continuing, and underlines the importance of this research in the solution of geochemical and cosmic problems. V.G. Khlopin is mentioned in reference to his investigations in the field of separation methods. There are no references.

TABLE OF CONTENTS: (None given)

AVAILABLE: Library of Congress (QH345.M35)

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JA/dwm/sfm
1-17-61

PHASE I BOOK EXPLOITATION SOV/3519

Vinogradov, Aleksandr Pavlovich

Khimicheskaya evolyutsiya zemli (Chemical Evolution of the Earth) Moscow, Izd-vo AN SSSR, 1959. 42 p. (Series: Chteniya imeni V.I. Vernadskogo, 1) Errata slip inserted. 3,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii.

Ed. of Publishing House: D.N. Trifonov; Tech. Ed.: S.P. Golub'.

PURPOSE: The book is intended for scientific researchers and students of geochemistry and geology.

COVERAGE: This is a publication of a lecture given at the Institute of Geochemistry and Analytical Chemistry of the Academy of Sciences USSR on March 30, 1959. The author states that the main problem of the chemical evolution of the earth is the problem of understanding the ways in which the total matter of the earth has separated into different zonal layers: core, mantle, crust, hydrosphere, and atmosphere. There are two systems of theories on the

Card 1/3

chemical evolution of the earth. The first one is based on the assumption that the formation of the earth's zonal layers was the result of primordial differentiation of the earth's matter from a "hot" stellar material of the protoplanet. The second hypothesis rejects the "hot" material theory and assumes the earth's formation was from a cold cosmic matter, with subsequent self-heating, partial melting and differentiation in superposed zones. The author adheres to the second ("cold") theory and presents experimental data from an analysis of meteorites to support that theory. There are no references given.

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Chemical Evolution of the Earth SOV/3519

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VINOGRADOV, A.P., akademik, otv.red.; TARASOV, L.S., red.izd-va; GUSEVA,
I.N., tekhn.red.

[Geochemistry of rare elements in connection with problems of petrogenesis; proceedings of the geochemical symposium, December 20-24, 1957] Geokhimiya redkikh elementov v sviazi s problemoy petrogenezisa; trudy geokhimichskogo simpoziuma, 20-24 dekabrya 1957 g. Moskva, Izd-vo Akad.nauk SSSR, 1959. 166 p. (MIRA 12:4)
(Petrology) (Metals, Rare and minor)

VINOGRADOV, Aleksandr Pavlevich

The geochemistry of rare and dispersed chemical elements in soils. 2nd ed., rev. and enl. New York, Consultants Bureau; London, Chapman and Hall, 1959.

209 P. Diagrs., Tables.

Translation of the original Russian: Geokhimiya redkikh i rasseyannykh khimicheskikh elementov v pochvakh.

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VINOGRADOV, A

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PHASE I BOOK EXPLOITATION

International Conference on the Peaceful Uses of Atomic Energy. 2d, Geneva, 1958.

Doklady sovetskikh uchenykh. [t.4] Khimiya radioelementov i radiatsionnykh prevrashcheniy (Reports of Soviet Scientists. v. 4.: Chemistry of Radioelements and Radiation Transformations) Moscow, Atomizdat, 1959. 323 p. 8,000 copies printed. (Series: Its: Trudy)

Ed. (Title page): A. P. Vinogradov, Academician; Ed.: V. I. Labaznov; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This collection of articles is intended for scientists and engineers interested in the applications of radioactive materials in science and industry.

COVERAGE: The book contains 26 separate studies concerning various aspects of the chemistry of certain radioactive elements and the processes of radiation effect on matter. These reports discuss present-day methods of reprocessing irradiated nuclear fuel, research in the chemistry of mercury, thorium, uranium, plutonium, and americium, problems related to the sorption and bury-

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ing of radioactive wastes, the radiolysis of aqueous solutions and of organic compounds, the mechanism of polymer chain grafting, and the effect of radiation on natural and synthetic rubbers. V. N. Prusakov edited the present volume. Most of the reports are accompanied by references. Contributors to individual investigations are mentioned in annotations to the Table of Contents.

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VINOGRADOV, A.P.

5(2) PHASE I BOOK EXPLOITATION SOV/2402

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii

Redkozemel'nyye elementy; polucheniye, analiz, primeneniye (Rare Earth Elements; Production, Analysis, and Use) Moscow, Izd-vo AN SSSR, 1959. 331 p. 5,000 copies printed.

Resp. Ed.: D. I. Ryabchikov, Professor. Eds. of Publishing House: D. N. Trifanov and T.G. Levi; Tech. Ed.: S. G. Mark ich; Editorial Board: I. P. Alimarin, Corresponding Member, USSR Academy of Sciences, I. N. Zaozerskiy, Doctor of Chemical Sciences, R. V. Kotlyarov, Candidate of Chemical Sciences, V. I. Kuznetsov, Doctor of Chemical Sciences, M. M. Senyavin, Candidate of Chemical Sciences, and Yu. S. Sklyarenko, Candidate of Chemical Sciences.

PURPOSE: This book is intended for chemists in general and for geochemists and analytical chemists in particular.

COVERAGE: This collection of articles consists of reports presented at the Rare Earth Elements Symposium held in June 1956 at the Institute of Geochemistry

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and Analytical Chemistry imeni V. I. Vernadskiy. The book may be divided into three sections: the characteristics, uses and production of rare earth elements (REE); the methods of analyzing REE; and the application of individual rare earth elements and REE mixtures in the glass and metallurgical industries, and their use as catalysts. Considerable space is devoted to the application of ion-exchange chromatography in the production of pure forms of all rare earth elements. The combinations of this method with other methods in separating REE on an industrial scale are discussed by D. I. Ryabchikov, Yu. S. Sklyarenko, and M. M. Senyavina. Chemical methods of separating REE compounds are discussed by I. N. Zaozerskiy (who is said to be the first in the USSR to develop methods of processing REE), V. P. Kotlyarov, Z. F. Andreyeva, A. V. Nikolayev, and G. P. Aleksandrov. Quantitative X-ray spectral analytical methods are described by E. Ye. Vaynshteyn, and chemical methods of analysis by I. P. Alimarin and F. I. Pavlotskaya. The determinations of REE impurities in pure products and atomic materials are discussed at length in three articles by A. N. Zaydel' and his associates. All articles are accompanied by photographs, diagrams, tables, and bibliographic references.

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(Trace elements) (Biochemistry) (Agriculture)

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(Radioactive substances) (Radiochemistry)

21(0) SOV/29-59-1-10/26

AUTHOR: Vinogradov, A. P., Academician

TITLE: On Thermonuclear Energy (O termoyadernoy energii)

PERIODICAL: Tekhnika molodezhi, 1959, Nr 1, pp 14 - 14 (USSR)

ABSTRACT: This is the point of view taken by the Academician A. P. Vinogradov on the above subject: "I am a chemist but not a physicist. At the Conference in Geneva, however, after attending the lectures and discussions of specialists working directly in this field, I got thoroughly convinced that physicists have no doubt that the problem of **controlling** thermonuclear reaction will be solved. The only question is the point of time when this will be attained. The general opinion of participants in the Conference of Geneva was that thermonuclear reaction will not be checked before 20 years. But it is known that in science, too, unexpected events may occur which greatly accelerate progress. The principal way of utilizing thermonuclear reaction is the direct transformation into electricity. Here is the difference between itself and fission reaction applied at present in atomic power stations. Due to the fact

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On Thermonuclear Energy SOV/25-59-1-10/26

that nuclear fission is utilized to a very low extent for the time being (the whole energy except heat is meant), modern atonic power stations are wanting in high efficiency. If we succeed in transforming thermonuclear energy directly to electricity, we shall obtain splendid possibilities for the development of economy". There is 1 figure.

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3(0) SOV/7-59-1-14/14

AUTHOR: Vinogradov, A. P.

TITLE: Professor F. A. Paneth (Professor F. A. Panet)

PERIODICAL: Geokhimiya, 1959, Nr 1, pp 100-100 (USSR)

ABSTRACT: Professor F. A. Paneth died in Vienna on September 17, 1958. He was born in Vienna in 1887 and began his career at the Radium Institute in Vienna. Between 1912 and 1914 he was the first to use natural radium isotopes as indicators in chemico-physical investigations, such as solubility determinations, distribution of microcomponents between 2 phases, radio colloids, etc. Professor Paneth was a pioneer in the field of radiochemistry but also dealt with problems of geochemistry and cosmochemistry such as the age determination of iron meteorites by the helium method, radioactivity determinations of rocks and meteorites etc. He left Germany in 1933 and went to London, and afterwards to Durham. It was there that he first was able to determine the age of Fe meteorites by the U/Th - He - method. Furthermore, he investigated by means of mass spectrometry the inert gases of the atmosphere, especially the He^4/He^3 ratio. In 1953 Professor Paneth returned to the German Federal Republic and joined the Academy of Sciences

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